On the Delayed Coincidence Circuits. (II)

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Abstracts of Papers

The following 33 papers are the second part out of 77 papers, read at the semi-annual meeting of the Institute from 24th to 26th November, 1950.

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1. On the Delayed Coincidence Circuits. (II)

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With the aim of measuring half life of Th C', we improved the delayed coincidence circuits reported in (I)* as follows:—

1. Timing Circuits.

Into the synchroscope we put the pulses of 1 K.C. frequency which were the out-put of the multivibrator fed by 100 K.C. crystal oscillation. So on the oscillograph screen we got the time-axis synchronized with the 100 K.C. Then, multiplying the 100 K.C. to 1 M.C. under synchronization, we calibrated the time-axis with it. It was found that the time-axis ran 10 cm per 3μsec. At the same time, putting the pulse for the time-axis into two thyratrons which had suitable and variable biases respectively, we could produce two pulses having various time time intervals: for instance, 1μsec., 0.5μsec., 0.2μsec., ... With them we tested the delayed coincidence circuits for the in-put pulses with various relative time lags.

2. Delay adjuster circuits.

To make more perfect the work of the reverse delay intercepter described in the last report*, we added the delay adjuster circuits. They were the circuits to make delay for the in-put pulse. The circuits were consisted of the tubes of type 6AG7 and 6AC7. The 6AG7 tube having the condenser between the plate and the cathode had the capability of changing the rectangular in-put pulse into the saw-toothed form. Inserting this positive saw-toothed pulse into the 6AC7 tube, we could make desirable delay in the in-put pulse.

* Bulletin of the institute for chemical research, Kyoto University. Vol. 23 p. 51 (1950)
